

**UNITED STATES DEPARTMENT OF THE INTERIOR  
BLM, BOISE DISTRICT**

**EA #ID130-2006-EA-3234**

Applicant (if any):	Proposed Action: <b>Construct ten small earthen structures in the Macks Creek Cooperative Wildlife Habitat Management &amp; Farming Area</b>			EA No. <b>ID130-2006-EA- 3234</b>
State: <b>Idaho</b>	County: <b>Owyhee</b>	District: <b>Boise</b>	Field Office: <b>Owyhee</b>	Authority: <b>NEPA, FLPMA</b>
Prepared By: <b>Owyhee ID Team</b>	Title: <b>Macks Creek &amp; Little Alkali Creek Ponds</b>			Report Date: <b>12/18/2007</b>

**LANDS INVOLVED**

Meridian	Township	Range	Sections	Acres
<b>Boise</b>	<b>2S</b>	<b>4W</b>	<b>23, 26</b>	<b>4 to 6</b>

Consideration of Critical Elements	N/A or Not Present	Applicable or Present, No Impact	Discussed in EA
Air Quality	X		
Areas of Critical Environmental Concern	X		
Cultural Resources		X	
Environmental Justice (E.O. 12898)	X		
Farm Lands (prime or unique)	X		
Floodplains			X
Migratory Birds			X
Native American Religious Concerns	X		
Invasive, Nonnative Species			X
Wastes, Hazardous or Solid	X		
Threatened or Endangered Species	X		
Social and Economic	X		
Water Quality (Drinking/Ground)			X
Wetlands/Riparian Zones			X
Wild and Scenic Rivers (Eligible)	X		
Wilderness Study Areas	X		

# **Environmental Assessment #ID-130-2006-EA-3234**

## **2006 Macks Creek & Little Alkali Creek Ponds & Check Dams**

### **1.0 Introduction**

#### **1.1 Purpose and Need for Action**

The purpose of this project is to create 10 additional ponds or check dams that would be utilized by waterfowl, upland game, and a diversity of other wildlife species within the Macks Creek Cooperative Wildlife Habitat-Farming Area (CWHFA) and adjacent Little Alkali Creek drainage. Retention structures along Little Alkali Creek would be designed to trap sediment within this ephemeral/intermittent drainage in order to gradually re-grade the channel and raise the water table. However, wetland habitat for wildlife is limited in the area by the soil properties, and Macks Creek being an intermittent creek only providing water for ponds during spring runoff.

#### **1.2 Summary of Proposed Action**

Owen Orndorff of Junayo Ranches is proposing to construct five additional small ponds within the Macks Creek CWHFA in T. 2S. R4W. Section 23 NW<sup>1</sup>/<sub>4</sub> and five additional check dams along Little Alkali Creek in Section 23 SE<sup>1</sup>/<sub>4</sub>SW<sup>1</sup>/<sub>4</sub> and Section 26 NENW<sup>1</sup>/<sub>4</sub>, which is outside of the CWHFA. Both project sites are within Pasture 1 of the Tyson FFR grazing allotment (#0616) and all projects would be constructed and maintained by Junayo Ranches.

#### **1.3 Location and Setting**

The Macks Creek CWHFA was created through a 1988 cooperative agreement between Junayo Ranches, the Bureau of Land Management, and the Idaho Department of Fish and Game. Macks Creek is a tributary to Reynolds Creek (Map 1). The cooperative agreement was renewed for a second 10-year period in 1998. The original cooperative management area included 125 acres. Of those acres, 75 were farmed with crops for livestock and wildlife. The Little Alkali Creek ponds are located on a BLM parcel separated by private land to the south of the CWHFA, within the Tyson FFR Pasture 1 boundary.

More than 30 ponds, ditches, and dugouts have already been developed on public lands within the cooperative agreement area and several others have been developed on adjacent private lands since 1988 (Map 2). Waterfowl utilize the ponds that retain water into July for nesting. Upland game and other wildlife species utilize the smaller ponds for water and cover habitat from predators. The smaller ponds on BLM land do not appear to retain water into the late spring and early summer needed to provide nesting habitat for waterfowl. The four retention/sediment collection dams along Little Alkali Creek were constructed in 1998. The water source for most of the ponds and dugouts is spring snowmelt runoff overflow or seepage from Big Macks Reservoir which was separately authorized as a right-of-way project (IDI-23193) in 1986. Big Macks Reservoir is filled via a diversion from Macks Creek. Macks Creek typically only flows

during spring snowmelt and is normally dry by June. Macks Creek itself is not within the project area, although a small tributary to Macks Creek is within the project area.

In 1999, Junayo Ranches assigned a portion of their water rights to BLM for use within the cooperative management area. Big Macks Reservoir and several of the ponds below the reservoir and on the eastern edge of the project area retain water nearly year-round, while the remainder of the ponds and dugouts dry up in early summer. During low water years no water may be available to fill the ponds and dugouts. During a late July visit in 2007, Big Macks Reservoir was dry, and all other ponds were dry except the northeastern pond, which still had a small amount of residual water, additionally gold fish were observed in the pond.

## **1.4 Conformance with the Land Use Plan**

The proposed action is in conformance with the 1999 Owyhee Resource Management Plan objectives WL 1 (pg. 15; USDI 1999).

## **1.5 Relationship to Statutes, Regulations, and Other Requirements**

Conformance with Cooperative Wildlife Habitat-Farming Area program in agreement with Idaho Fish and Game

## **1.6 Scoping and Development of Issues**

The proposed action is part of an ongoing habitat management project that began in 1988 and most issues were resolved during earlier phases of the project (prior NEPA docs – 02-078, 98-031, 97-004, 94-089, CE-90-117, CE-89-106, CE-01-87-51). As such, scoping was limited to internal review for any new information. During a botanical survey of the project area in 2006; noxious weed species were identified within the CWHFA. This issue is addressed in the Affected Environment and Mitigation sections.

## **2.0 Description of the Proposed Action and Alternatives**

### **2.1.1 Alternative A - No Action/Continue Present Management**

Existing structures within the Macks Creek Cooperative Wildlife and Farming Area and Little Alkali Creek would continue to be maintained by Junayo Ranches. No additional dikes or ponds would be constructed.

### **2.1.2 Alternative B - Proposed Action**

The proposed action includes construction of ten small check dams and ponds; five are within the Macks Creek CWHFA in T. 2 S. R. 4 W. Section 23 NW¼., and five are located along Little Alkali Creek in the SESW ¼ of section 23 (Map 1) and are outside of the cooperative wildlife habitat and farming area project area. All check dams and ponds would be constructed by excavating small depressions and constructing earthen dams downstream of each depression using the excavated material. All dams would be less than ten feet high and equipped with emergency spillways. The resulting ponds would be approximately 0.25 to 0.5 acre in surface

areas. Ponds within the Macks Creek CWHFA would be filled via existing ditches and overland irrigation flow diverted from Macks Creek. Structures along Little Alkali Creek would be constructed within the stream channel and would catch water primarily during late winter and spring runoff and summer rainstorm events which are the only times water is in this drainage.

Junayo Ranches would provide all labor and equipment and continue to assume all maintenance responsibility for these and all existing dikes, ditches, ponds and dugouts. However, maintenance requiring ground disturbance would be approved by the authorizing officer.

## **2.2 Comparison of Alternatives**

Alternative A would result in no additional habitat or resource disturbance. Existing structures and ponds and associated wetlands would continue to be maintained to provide breeding and rearing habitat for dependant waterfowl in ponds that retain water into June. Other wildlife species would utilize the ponds that seasonally dry up for a water source.

Alternative B, the proposed action, would result in approximately 5 acres of soil, vegetation, and habitat disturbance during the short term, resulting in increased seasonal (early spring) wetland habitat (3 acres) and continued restoration of habitat along Little Alkali Creek (1/2 mile) through decreased erosion and soil loss. The disturbance in the Macks Creek portion would take place within lands which have been burned, disked and seeded in the past.

## **3.0 Affected Environment**

### **3.1 Physical**

#### **3.1.1 Soils**

These soils occur on fan terraces and formed in alluvium and residuum derived from sedimentary materials (dominantly lacustrine) and welded rhyolitic tuffs. Soil profile characteristics have been influenced by wind deposited materials (loess) which are the major source of carbonates in the area. These soils are shallow to very deep and well drained to moderately well drained. Various forms of cementation (duripans) are common at differing depths in the soil profiles. Surface soil textures range from loams and silt loams to various sandy loams. Subsoils vary from sandy loam to clay loam with weak to strong development. Permeability ranges from slow to moderately slow and is highly influenced by the subsoil clay accumulation zone. The USDA Soil Survey identifies severe water seepage limitations for constructed ponds and reservoirs. The erosion potential from wind and/or water is slight to high depending on surface texture and slope.

Erosion from water is the primary concern on these soils and occurs in the form of sheet, rill, and gully processes. These processes are most active on soils that occur in the sedimentary beds and alluvial terraces.

## 3.2 Biotic

### 3.2.1 Upland Vegetation

The remaining native plant communities in the Macks Creek portion of the project area are comprised of Wyoming big sagebrush (*Artemisia tridentata wyomingensis*), green rabbitbrush (*Chrysothamnus visidiflorus*), bluebunch wheatgrass, (*Pseudoroegneria spicata*) bottlebrush squirreltail (*Elymus elymoides elymoides*) with exotic invasive species; medusahead (*Taeniatherum caput-medusa*), and cheatgrass (*Bromus tectorum*). Some basin wildrye (*Elymus cinereus*) occurs in drainages, and a single western juniper (*Juniperus occidentalis*) tree is present. There is a high percentage of mortality and decadence among the Wyoming big sagebrush plants, which is likely related to the extended drought conditions in the area. Additionally, several Idaho listed noxious weeds occur in the project area (See noxious weed section below).

A large portion of the Macks Creek CWHFA was burned in the 1980s to remove native vegetation and seeded to perennial ryegrass, alfalfa and crested wheatgrass during the initial implementation of this agreement.

Upland plant communities in the Little Alkali Creek area consist primarily of; basin big sagebrush (*Artemisia tridentata* var. *tridentata*), antelope bitterbrush (*Purshia tridentata*), Wood's rose (*Rosa woodsii*), Douglas' hawthorn (*Crataegus douglasii*), Saskatoon serviceberry (*Amelanchier alnifolia*), and curleaf mountain mahogany (*Cercocarpus ledifolius*). These species were observed within and around the drainage where the new ponds would be located.

### 3.2.2 Noxious Weeds

In 2006, in the Macks Creek CWHMA portion, approximately 30 species of exotic plants were found near the existing ponds and the site of the proposed ponds. Three species on the Idaho noxious weed list; *Cardaria draba* (whitetop), *Lepidium latifolium* (perennial pepperweed), and *Cirsium arvense* (Canada thistle) have been observed in and immediately adjacent to the CWHMA. Whitetop and perennial pepperweed were both observed within the perimeter of the existing ponds and potential sites of the new ponds. These locations were reported to the BLM Boise District weed specialist who began treatments in the area and is working with Junayo Ranch employees for treatments on adjacent private lands.

### 3.2.3 Wildlife

A variety of wildlife occur within these areas including species of nesting and migrating waterfowl, shorebirds, wading birds, upland game including ring-necked pheasant and California quail, mule deer, Piute ground squirrel, and non-game birds, amphibians, reptiles, and small mammals including bat species. The area is used by Canada geese and ducks in the spring for feeding and nesting. Big Macks Reservoir and a few of the smaller ponds provide year-round habitat cover from predators and forage for some wildlife species.

### 3.2.4 Special Status Species – Botany and Wildlife

Plants – No federally listed plant species are known to occur in this allotment, although the U.S. Fish and Wildlife Service (USFWS) considers all of Idaho to be within the potential range of Ute ladies'-tresses (*Spiranthes diluvialis*), a federally threatened orchid species. This plant occurs in

spring, seep, and riparian habitats. Due to the difficulty in narrowly defining potential habitat for this species, USFWS has chosen to apply a loose definition and requires Section 7 consultation only in three counties of southeast Idaho or in areas where the plant is actually found (USFWS 2002). Surveys specifically for this plant are recommended prior to authorizing federal actions in southwest Idaho, but not required.

In 2002, a population of Packard's desert parsley (*Lomatium packardiae*) was located on BLM lands within the CWHMA. This species has a BLM Type 2 status, which is given to species that have a high likelihood of being listed in the foreseeable future due to their global rarity and significant endangerment factors (IDFG, 2007). The population was extirpated by farming operations in conjunction with this project between 2002 and 2004. In 2002, threats to this population were listed as noxious weeds, road traffic, pedestrian traffic accessing ponds, and winter livestock grazing. Additionally, a population of Malheur prince's plume (*Stanleya confertiflora*) also a BLM Type 2 species occurs on private land within ½-mile of the project area. No other populations of BLM special status plant species have been located during multiple botanical surveys in the area.

Animals - Several BLM Sensitive animal species are known or likely to occur within the area although none were observed during the project clearance. However, greater sage-grouse sign has been observed in subsequent visits. Species likely to occur within wetlands and riparian habitats include the willow flycatcher, Woodhouse's toad, and common garter snake. Those likely to occur within adjacent sagebrush steppe and/or desert shrub habitats include the, ferruginous hawk, prairie falcon, greater sage-grouse, sage sparrow, Brewer's sparrow, loggerhead shrike, western ground snake, and longnose snake.

### **3.2.5 Riparian/Water Quality**

The 125 acres in the Macks Creek CWHMA did not contain any riparian areas until construction of Big Macks Reservoir and initiation of the cooperative agreement. All existing riparian areas are man-made. The Little Alkali Creek drainage does not support riparian areas although the existing check dams are retaining water long enough to support willows and other hydric vegetation.

Little Alkali Creek supports mixed herbaceous and woody riparian vegetation, associated with several seeps and seasonal stream flow, including; rushes, spikerush, and black hawthorn and willow. Prospective pond and dike locations in the Little Alkali Creek drainage contain fewer exotic plant species, and a healthy riparian complex of plant species. Four check dams constructed in 1998 have also trapped sediment and created seasonal wetland habitat.

A natural spring is located within 25 meters of the proposed upland pond system in Little Alkali Creek.

Water quality parameters have not been monitored in any of the constructed ponds. Soluble salts are concentrating primarily around pond embankments and immediately below check dams and appear as whitish crystalline powder. Soil deflocculation in the constructed ponds has not occurred and is unlikely to occur due to the general lack of sodium in the surrounding soils.

### **3.3 Social**

#### **3.3.1 Recreation and Visual Resource Management (VRM)**

##### ***Recreation***

The area provides some opportunities for waterfowl, upland game bird hunting, wildlife viewing, and driving for pleasure. Off-highway vehicles (OHVs) are limited to existing roads and trails. Cross-country motor vehicle travel is not authorized in the Owyhee Resource Area.

The majority of the proposed project area is classified as Rural, with the two southern most proposed ponds along Alkali Creek being classified as Roaded Natural under the Recreation Opportunity Spectrum (ROS). The ROS classification system is used to characterize the type of recreational opportunity settings, activities, and experience opportunities that can be expected in different areas of public land.

The Rural classification is an area that is characterized by a substantially modified natural environment. Resource modifications and utilization practices are obvious. Sights and sounds of man are readily evident, and the concentration of users is often moderate to high.

The Roaded Natural classification is an area that is characterized by a generally natural environment with only moderate evidence of the sights and sounds of man. Resource modifications and utilization practices are evident, but harmonize with the natural environment.

##### ***VRM***

Public lands within the proposed project area are categorized as VRM Class III. The objective of this class is to partially retain the existing character of the landscape. The level of change to the characteristic of the landscape should be moderate. Management activities may attract attention but should not dominate the view of the casual observer. Changes should repeat the basic elements found in the predominant natural features or the characteristic landscape. This classification occurs where the amount of use is relatively high and scenic quality is generally good.

Maintenance, construction, and reconstruction of rangeland facilities and vegetation treatment projects are permitted. Recreation sites and construction and reconstruction of roads are permitted. In this classification emphasis is placed on construction techniques that will reduce the projects visual impacts to the natural landscape.

#### **3.3.2 Cultural**

A total of eight cultural inventories dating back to 1986 have been conducted within the proposed areas of potential effect. There is one previously recorded prehistoric site in the vicinity, but there are no cultural properties within or in close proximity to the areas that would be disturbed by the project.

#### **3.3.3 Livestock Management**

Both project areas are within Pasture 1 of the Tyson FFR (fenced federal range) grazing allotment. The allotment is classed as an FFR due to the high percentage of the land in the

allotment being privately owned. This pasture is grazed during the fall and winter months in association within adjacent private land and the Little Alkali Creek area is grazed in the spring. The permittee is Junayo Ranches.

## **4.0 Environmental Consequences**

### **4.1 Direct and Indirect Impacts**

#### **4.1.1 Alternative A – No Action**

This alternative would result in no additional resource disturbance except for that associated with periodic maintenance of the existing dikes and ponds.

##### **Physical**

**Soils** - No surface disturbing activities would occur and, therefore, no new impacts to the soil resource would occur. However, the current practice of water spreading would continue to occur and place these soils at an increased risk of erosion. Soils in this area are prone to erosion from sheet flows and the practice of water spreading would continue to be detrimental to the development of a healthy soil profile and would pose a significant risk of erosion.

##### **Biotic**

**Upland Vegetation** – Under this alternative, there would be no new impacts either direct or indirect on the upland vegetation.

**Noxious Weeds** – The Boise District BLM weed specialists in cooperation with the ranch foreman for Junayo Ranches would continue to monitor and treat noxious weed infestations to stop the spread of these species.

**Wildlife** - Existing ponds would continue to provide limited wetland and riparian habitat for wildlife and special status animals.

#### **Special Status Species – Botany/Wildlife**

**Plants** – No special status plant species are known to occur within the project area therefore, no impacts are expected to occur to special status plant species or habitats as a result of this alternative.

**Animals** - The farmed areas would continue to provide forage and cover for the greater sage-grouse. Greater sage-grouse probably utilize the framed areas a brood rearing habitat. (2007 Idaho Sag-grouse Advisory Committee) The existing ponds would provide a water source for greater sage-grouse.

**Riparian/Water Quality** - Existing check dams along lower Alkali Creek would continue to trap sediment and contribute to channel stabilization and restoration. If water was retained long enough, hydric vegetation would encroach in areas around ponds and stabilize sediments. Soluble salts would increase and concentrate due to the seasonal wetting and drying of the ponds.



Eventually salt accumulation in the ponds will attain a concentration to which hydric vegetation will become negatively affected and only certain salt tolerant species, such as Baltic rush, will persist.

### **Social**

#### **Recreation**

There would be no short term, long term, or cumulative impacts expected as a result of the no action alternative. Current recreation opportunities would be maintained.

#### **VRM**

Continuation of the management would maintain the existing visual conditions of the area, which is within the criteria for the classification. Maintenance of existing developments may have some short-term negative visual effects; however, the level of impact is considered acceptable for these VRM classifications.

### **Cultural**

Under Alternative A, no additional ponds or ground disturbing activities would occur. There would be no effect on cultural resources under this alternative.

**Livestock Management** - There would be no significant impacts to livestock grazing management in the short-term or the long-term under this alternative. Existing ponds are adequate to supply livestock water during the grazing period. Production of forage for livestock use would remain unchanged.

## **4.1.2 Alternative B – Proposed Action**

### **Physical**

**Soils** - Direct long-term impacts to the soils would be in the form of mechanical disturbance during the initial construction phase. This would involve removal, mixing, and relocating soils to form the depression foot print and the associated earthen dam. Short-term erosional processes would occur until the earthen dams become stabilized. Where drainage from these project sites leads to Macks Creek there is a risk of sediment being delivered during high or peak flow events. Due to the small size of each dam site, between 0.25 and 0.5 surface acres, the overall impact in the area would be very slight.

### **Biotic**

**Upland Vegetation** - The proposed dams and ponds within the Macks Creek area would be located within an area that has been previously disturbed and altered as part of the original burn and seeding. Approximately three acres of upland vegetation would be disturbed during the short term. In Little Alkali Creek, some disturbance would occur to the native vegetation on approximately two acres. The long-term change in vegetation would be towards more hydric species directly associated with the pond areas.

**Noxious Weeds** - The Boise District BLM weed specialists in cooperation with the ranch foreman for Junayo Ranches would continue to monitor and treat noxious weed infestations to stop the spread of these species.

**Wildlife** - The creation of additional ponds would benefit wildlife and special status animal species if the ponds can sustain riparian habitat and water for a few months of the year. The ponds could provide a slight increase in rest areas for migrating waterfowl and nesting habitat if riparian habitat is established for various species of waterfowl, upland game, shorebirds, other non-game birds, small mammals, reptiles, and amphibians over the long term. During the construction of the ponds wildlife species could avoid the area due the disturbance associated with machinery. It is expected that wildlife would return after construction activities are completed.

#### **Special Status Species – Botany/Wildlife**

**Plants** - No special status plant species are known to occur within the project area therefore, no impacts are expected to occur to special status plant species or habitat as a result of this alternative.

**Animals** - Additional ponds could increase water source options for the greater sage-grouse. If the new ponds are planted with riparian cover this could provide additional habitat for prey base species for Ferruginous hawk and insect eaters like long-eared myotis, long-legged myotis Western Small-footed myotis and Western Pipistrelle.

#### **Riparian/Water Quality**

Additional pond development would help to raise and maintain higher water tables which would increase riparian and meadow vegetation. Hydric vegetation would eventually encroach in areas around ponds and stabilize sediments. Soluble salts would increase and concentrate due to the seasonal wetting and drying of ponds. Eventually salt accumulation in ponds will attain a concentration to which hydric vegetation will become negatively affected and only certain salt tolerant species (Baltic rush) will persist.

#### **Social**

##### **Recreation**

Additional ponds and meadow/riparian habitat would create additional recreational opportunities in the form of waterfowl and upland game hunting and wildlife viewing over the short and long term.

#### **VRM**

The proposed construction and maintenance of ponds and check dams under this alternative would have negative visual effects in the short term by creating more areas of disturbance. In the long term, once vegetation is established in the project areas the visual effects will be minimal. These levels of impacts from the proposed developments under this alternative are considered acceptable for the VRM classifications in this area.

## **Cultural**

Alternative B proposes the construction of ten additional ponds and/or check dams. Eight cultural resources inventories have been completed since 1986 that covered 240 acres (100%) of BLM land and approximately 19 acres of private land in Section 23. Additional survey coverage of adjoining BLM land includes 58 acres in Section 26 and approximately 0.5 acre in Section 22.

No sites have been recorded within the areas proposed for the current project and the only previously recorded site lies about 300m (985 ft.) away from the nearest proposed disturbance. No cultural resources would be effected by the implementation of this proposal.

**Livestock Management** - Under this alternative, livestock forage would be slightly reduced, because approximately 3 acres of upland vegetation would be disturbed (less than one percent of the public land acreage in the Tyson FFR allotment). Areas converted to seasonally inundated ponds would not be expected to support significant amounts of suitable livestock forage in the short-term and the long-term. However, decreases in current upland forage would likely be mitigated by increases in production of riparian and wet meadow areas below the proposed ponds due to increased moisture during the growing season. The current grazing permittee is the proponent of the proposed action described in this document.

## **4.2 Mitigation**

Noxious weeds would be monitored and actions taken to control or limit the spread of these species if deemed appropriate by the BLM Boise District Weed Specialists. Weed management is being coordinated with Junayo Ranches.

## **4.3 Cumulative Impacts**

Projects to enhance wetland and riparian habitat and stabilize degraded stream channels have occurred within the Macks Creek CWHFA and Little Alkali Creek since the late 1980s. To date, there are approximately 32 ponded structures within the 160 acres of public land associated with the CWHFA, and 5 along Little Alkali Creek. Similar management has also been implemented on adjacent private lands belonging to Junayo Ranches during this same period. The cumulative effects of these actions have been to increase the availability of habitat for waterfowl, shorebirds and a large diversity of other wildlife that are associated with wetlands. Conversely, there has been a decrease of native sagebrush steppe habitats as a result of these actions.

Although the 10 small structures individually do not have significant impacts, the cumulative impacts of having this proliferation of ground disturbance, overland flow, and ponds has the potential to permanently alter the natural hydrology and stream functions (Brooks et al 2001).

Perennial water inundation in these ponds is questionable due to their shallowness and high water seepage potential of the soils. Continued wetting and drying of the ponds accumulates and concentrates soluble salts. Eventually, salt concentrations negatively affect riparian vegetation as well as pastures irrigated with this water. Salinization of irrigated pastures could occur (Hanson et al 1993 and Mace et al 2001).

## **5.0 Consultation and Coordination**

### **5.1 List of Preparers**

<b>Name</b>	<b>Specialty</b>
Jill Holderman	Wildlife
Kathi Kershaw	Vegetation/Botany
Dominika Lepak	Range Management
Brian McCabe	Cultural Resources
Ryan Homan	Recreation
Richard Jackson	Riparian/Hydrology
Paul Seronko	District Soils Specialist

### **5.2 List of Agencies, Organizations, and Individuals Consulted**

<b>Name</b>	<b>Affiliation</b>
Owen Orndorff	Junayo Ranches

### **5.3 Public Participation**

Presented to Shoshon-Paiute Tribe at Wings and Roots monthly consultation meeting, October 18, 2007.

## 6.0 Literature Cited

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